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Incipient Fault Detection of Electric Power Transformers Using Fuzzy Logic Based on Roger's and IEC Method	عنوان البحث :
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	ملخص البحث

Power transformer is an essential part in any power plant, so continuous check of its reliability should be kept up. Dissolved Gas Analysis (DGA) is one of the most important techniques for detecting incipient faults of transformer that immersed in insulation oil. Some widely used conventional techniques based on DGA such as Roger's and IEC methods were developed to diagnose faults of power transformers. These methods succeeded noticeably to detect transformer's faults. However, they fail to detect the fault type if the measured ratios of gases slightly deviated from the crisp boundaries of ranges assigned by these methods. An Artificial Intelligent technique based method called fuzzy logic approach, which is the field of study in this paper is used to overcome the above mentioned drawback by fuzzifying the boundaries of ranges defined by these techniques. This paper presents a comparison between the results of conventional Roger's, IEC methods and the proposed fuzzy logic.